



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/581,604 06/15/00 TANAKA

H 1217-001125

EXAMINER

IM52/0925

RUSSELL D ORKIN
700 KOPPERS BUILDING
436 SEVENTH AVENUE
PITTSBURGH PA 15219-1818

AHMED, S
ART UNIT

PAPER NUMBER

1773
DATE MAILED:

09/25/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/581,604

Applicant(s)
Tanaka et al.

Examiner
Sh eba Ahmed

Art Unit
1773



-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1035 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kayanoki (US 5,963,373).

Kayanoki discloses a plastic lens comprising a plastic lens substrate (*equivalent to the substrate of the claimed invention*) and a hard coating applied thereon. The hard coating (*equivalent to the coating liquid and the hard coat film of the claimed invention*) comprises fine particles of a composite oxide (*equivalent to the composite metal oxide particles of the claimed invention*) having an average particle diameter in the range of from 1 to 100 nm (*thus meeting the particle size limitations*) and an epoxy group containing silicon compound (*equivalent to the matrix-forming component of the claimed invention*). The composite oxide is preferably composed of iron oxide, titanium oxide and a silica component. The weight ratio of the iron oxide to the titanium oxide is in the range of 0.005 to 1.0 and the weight ratio of silica to the sum of the iron oxide and titanium oxide is in the range of 0.001 to 1.0. The fine particles are surface treated with an organosilicon compound (*thus meeting the limitations of claims 3 and 6*).

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(Column 7, lines 25-67 and Column 9, lines 28-30). The hard coating may be provided with a mono-layered or multi-layered anti-reflection film *(thus meeting the limitations of claims 5 and 10-12)* (Column 11, lines 38-43). Kayanoki substantially discloses the claimed invention but does not specifically state that the weight ratio of the iron oxide to the titanium oxide may be 0.0005 to less than 0.005. However, the Examiner takes the position that it would have been obvious to one having ordinary skill in the art to have determined the optimum weight ratio of the iron oxide to the titanium oxide through routine experimentation given that the blend ratio of the iron oxide and the titanium oxide may be varied to obtain shielding within a specific wavelength region, i.e., UV region vs. visible light region *(as evidenced by Terasse et al. given that Terasse et al. disclose silica-metal oxide particulate composites (Column 1, lines 6-10) wherein the metal oxide particulates are titanium oxide and ferrous or ferric oxide (Column 2, lines 53-58) and may be used in combination (Column 3, lines 7-11). Terasse et al. further teach that the specific metal oxide and the amount of the specific metal oxides are selected depending on the particular purpose of the composite material. For example, UV shielding function can be imparted to the composite material by varying the amount of titanium oxide, zinc oxide and iron oxide: See Column 2, lines 53-67 and Column 3, lines 40-67)* and further given the absence of a showing of criticality in the claimed ratio.


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Conclusion

2. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Sheeba Ahmed whose telephone number is (703) 305-0594. The Examiner can normally be reached on Monday-Friday from 8am to 5pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Paul Thibodeau, can be reached at (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5436.

 Sheeba Ahmed
September 21, 2001


Paul Thibodeau
Supervisor, Examiner
Technology Center (703)